

ABSTRACT

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5 An abrading plate has self-stopping capability such  
that when an object, such as a semiconductor wafer having a  
device structure that includes raised regions and depressed  
regions fabricated on the surface, is being polished, the  
raised regions are removed and polishing stops  
automatically. The abrading plate, to produce a flat and  
mirror polished surface on an object, has abrasive particles  
10 having a chemical purity of not less than 90 % and a  
particle size of not more than two micrometers, a binder  
material, and a given volume of porosity. A ratio of the  
abrasive particles and the binder material is not less than  
1:0.5 by volume, and proportions of abrasive particles, a  
15 binder material and porosity are, respectively, not less  
than 10 %, not more than 60 % and 10~40 by volume. A  
surface is polished for a given duration with a liquid not  
containing abrasive particles so as to eliminate the raised  
regions to obtain a flat surface. Additional surface  
20 removal is performed by supplying abrasive particles to the  
polishing interface to remove surface material uniformly  
from the entire surface.